



Rwanda Agronomy: Pruning and Rejuvenation, Lesson Plan

TOTAL TIME: 1 hour 40 minutes

AUDIENCE: Farmers

FACILITATOR: Farmer Trainer

LOCATION: Field

OBJECTIVES:

- **OBJECTIVE 1:** Farmers appreciate the benefits of pruning and rejuvenation
- **OBJECTIVE 2:** Farmers know when and how often to prune and rejuvenate coffee trees
- **OBJECTIVE 3:** Farmers can demonstrate how to prune coffee trees.
- **OBJECTIVE 4:** Farmers can demonstrate how to rejuvenate coffee trees

MATERIALS:

- 5 Secateurs
- 5 Pruning saws

TIME	CONTENT OUTLINE
10 min	<p>OPENING:</p> <p>INTRODUCTIONS:</p> <ul style="list-style-type: none"> ▪ Instructor ▪ Participants ▪ Guests <p>REVIEW:</p> <ul style="list-style-type: none"> ▪ This month we will learn about pruning and rejuvenation (change of cycle). Specifically, we will talk about the benefits of rejuvenation and pruning and then practice how to rejuvenate and prune coffee trees. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>ACTIVITY: Icebreaker Select an icebreaker that is appropriate for your audience.</p> </div>
20 min	OBJECTIVE 1: Farmers appreciate the benefits of pruning and rejuvenation

ACTIVITY: Productive Trees

- a) SHOW the farmer a picture of the tree with old main stems, and picture of the pruned and rejuvenated tree.
- b) ASK the farmers to show you the tree that they think will produce the most coffee
- c) ASK one farmer to TELL the group why they think that tree will produce more coffee than the other tree.
- d) DISCUSS.
- e) USE the activity as an introduction to the benefits of pruning and rejuvenation.



Note to Trainer: Brainstorm with the participants, then review the answers.

ASK: What is rejuvenation and pruning, how are they different?

ANSWER:

- Rejuvenation is removal of old main stems to bring up completely new young stems.
- Pruning is the removal of unwanted branches on the main stems.

ASK: Why do we need to rejuvenate?

ANSWERS:



	<ul style="list-style-type: none">▪ Rejuvenation allows the growth of new main stems; these produce young productive branches that will produce more crop. Old branches don't produce so much coffee and the bean size is often smaller.▪ Coffee Berry Disease (CBD) is worse on old main stems so frequent rejuvenation reduces CBD. White stem borer prefers out main stems, so frequent rejuvenation also reduces the incidence of White stem borer▪ Frequent rejuvenation also keeps pruning very simple. <p>ASK: Why should you prune your coffee?</p> <p>ANSWERS:</p> <ul style="list-style-type: none">▪ Pruning opens trees to allow good light penetration which encourage flowering.▪ Pruning also opens trees to allow air circulation which helps control pests and diseases like CBD.▪ Pruning removes unproductive branches such as suckers, dead branches and crossing over branches so the trees directs it energy into making bigger coffee berries. <p>REVIEW:</p> <ul style="list-style-type: none">▪ Good tree canopy management through rejuvenation and pruning will ensure that even trees planted a long time ago continue to produce as if they were recently planted young and vigorous trees.
<p>10min</p>	<p>OBJECTIVE 2: Farmers know when and how often to prune and rejuvenate coffee trees.</p> <p><i>Note to trainer: Brain storm with the participants, then review the answers.</i></p> <p>ASK: When is the best time to rejuvenate?</p> <p>ANSWER:</p> <ul style="list-style-type: none">▪ The best time to rejuvenate is after harvest and before flowering. <p>ASK: How often should you rejuvenate?</p> <p>ANSWER:</p> <ul style="list-style-type: none">▪ Rejuvenate after every 5-6 harvest years. If the trees are left longer than this, they will become less productive and Coffee Berry Disease will increase.▪ Rejuvenation should be done after the main harvest. <p>ASK: When do you think it is important time to prune?</p> <p>ANSWER:</p>



	<ul style="list-style-type: none"> ▪ Main pruning should happen every year once harvest is complete. ▪ After rains an extra pruning is required to remove unwanted suckers. ▪ Every time the suckers sprout
<p>30 min</p>	<p>OBJECTIVE 3: Farmers can demonstrate how to prune coffee trees.</p> <p>ACTIVITY: Pruning</p> <p>a) DEMONSTRATE how to prune 1 tree following the steps below. EXPLAIN to the farmers exactly what you are doing and why as you demonstrate. ANSWER any questions.</p> <ol style="list-style-type: none"> 1. REMOVE any remaining berries from trees before pruning. The berries should be burnt. This reduces the incidence of berry borer and disease so is very important. 2. CHECK there are only 2 or 3 main stems, if there are more than 3 remove the extra main stems using a saw. 3. DE-SUCKER the main stems and base of trunk using secateurs. Stress that this should be done whenever required, which may be more than once a year. 4. REMOVE all the branches that cross over in the middle of the tree to “open” centers. 5. REMOVE any branches that touch the ground. 6. REMOVE any dead branches. 7. CUT branches as close to the stem as possible, so that the bark can grow over and heal the cut. <p>EXPLAIN the pruned material can be used for mulching if chopped up</p>
<p>20 Min</p>	<p>OBJECTIVE 4: To enable farmers to demonstrate how to rejuvenate coffee trees.</p> <p>ACTIVITY: COFFEE REJUVENATION</p> <ul style="list-style-type: none"> ▪ Remove two old main stems and leave one. <ul style="list-style-type: none"> ○ The remaining main stem should be healthy, able to bear fruit in the current year, and if possible, flexible and not yet woody. ○ Cut the two main stems about 25–30 cm above the ground, making a slanting cut at a 45° angle away from the stump so that water can flow off easily. ▪ Remove all branches on the remaining main stem that block sunlight from reaching the stump (where new shoots will emerge). ▪ Explain that there will be a follow-up visit when the new shoots reach about 20–30 cm in height, in order to select those that will become the new main stems.



	<ul style="list-style-type: none">▪ When the new shoots are one-year-old, the remaining old main stem will also be cut back using the same method described above, leaving three new main stems to continue growing.▪ The cut stems should be removed from the plot.<ul style="list-style-type: none">○ Small branches can be used as mulch for the coffee trees.○ Larger stems can be used as firewood
10 min	<p>CLOSING:</p> <p>REVIEW KEY LEARNINGS.</p> <div style="border: 1px solid black; background-color: #e0e0e0; padding: 10px;"><p>ACTIVITY: Knowledge Check <i>Ask participants the following questions to check knowledge and understanding. Give corrective guidance as required:</i></p><ul style="list-style-type: none">▪ Why do we need to rejuvenate?▪ How often should you rejuvenate each tree?▪ Why do we need to prune?▪ How often do we prune?</div> <p>QUESTIONS AND ANSWERS</p>